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* * * * * * * * *   Welcome to STN International   * * * * * * * * * *

 NEWS 1   Web Page for STN Seminar Schedule - N. America
 NEWS 2 DEC 01   ChemPort single article sales feature unavailable
 NEWS 3 JUN 01   CAS REGISTRY Source of Registration (SR) searching
                   enhanced on STN
 NEWS 4 JUN 26   NUTRACEUT and PHARMAML no longer updated
 NEWS 5 JUN 29   IMSCOPROFILE now reloaded monthly
 NEWS 6 JUN 29   EPFULL adds Simultaneous Left and Right Truncation
                   (SLART) to AB, MCLM, and TI fields
 NEWS 7 JUL 09   PATDPAFULL adds Simultaneous Left and Right
                   Truncation (SLART) to AB, CLM, MCLM, and TI fields
 NEWS 8 JUL 14   USGENE enhances coverage of patent sequence location
                   (PSL) data
 NEWS 9 JUL 27   CA/CAplus enhanced with new citing references
 NEWS 10 JUL 16   GBFULL adds patent backfile data to 1855
 NEWS 11 JUL 21   USGENE adds bibliographic and sequence information
 NEWS 12 JUL 28   EPFULL adds first-page images and applicant-cited
                   references
 NEWS 13 JUL 28   INPADOCDB and INPAFAMDB add Russian legal status data
 NEWS 14 AUG 08   Improve STN by completing a survey and be entered to
                   win a gift card
 NEWS 15 AUG 10   Time limit for inactive STN sessions doubles to 40
                   minutes
 NEWS 16 AUG 17   CAS REGISTRY, the Global Standard for Chemical
                   Research, Approaches 50 Millionth Registration
                   Milestone
 NEWS 17 AUG 18   COMPENDEX indexing changed for the Corporate Source
                   (CS) field

 NEWS EXPRESS MAY 26 09 CURRENT WINDOWS VERSION IS V8.4,
              AND CURRENT DISCOVER FILE IS DATED 06 APRIL 2009.

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* * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 13:35:12 ON 18 AUG 2009

=> file registry
COST IN U.S. DOLLARS                              SINCE FILE      TOTAL
                                                      ENTRY     SESSION
FULL ESTIMATED COST                                    0.22        0.22

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STRUCTURE FILE UPDATES:   17 AUG 2009  HIGHEST RN 1174495-28-3
DICTIONARY FILE UPDATES:  17 AUG 2009  HIGHEST RN 1174495-28-3

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TSCA INFORMATION NOW CURRENT THROUGH June 26, 2009.

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http://www.cas.org/support/stngen/stndoc/properties.html

=>
Uploading C:\Program Files\STNEXP\Queries\10567430clm58.str
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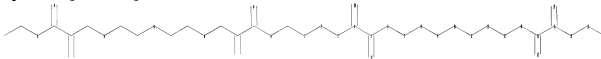


```
chain nodes :
1   2   3   4   5   6   7   8   9   10  11  12  13  14  15  16  17  18  19  20  21  22  23
chain bonds :
1-2   2-3   3-4   4-5   4-20   5-6   5-21   6-7   7-8   8-9   9-10   10-11   11-12   12-13
13-14   14-15   15-16   15-22   16-17   16-23   17-18   18-19
exact/norm bonds :
2-3   3-4   4-20   6-7   7-8   9-10   10-11   12-13   13-14   16-17   16-23   17-18
exact bonds :
```

```
1-2  4-5  5-6  5-21  8-9  11-12  14-15  15-16  15-22  18-19


Match level :
1:CLASS  2:CLASS  3:CLASS  4:CLASS  5:CLASS  6:CLASS  7:CLASS  8:CLASS  9:CLASS
10:CLASS  11:CLASS  12:CLASS  13:CLASS  14:CLASS  15:CLASS  16:CLASS  17:CLASS
18:CLASS  19:CLASS  20:CLASS  21:CLASS  22:CLASS  23:CLASS




L1      STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1            STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.


=> s l1 sss sam
SAMPLE SEARCH INITIATED 13:36:07 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -     421 TO ITERATE

100.0% PROCESSED     421 ITERATIONS                           0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:        7189 TO      9651
PROJECTED ANSWERS:              0 TO         0

L2          0 SEA SSS SAM L1

=> s l1 sss full
FULL SEARCH INITIATED 13:37:54 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -     7246 TO ITERATE

100.0% PROCESSED    7246 ITERATIONS                           0 ANSWERS
SEARCH TIME: 00.00.01

L3          0 SEA SSS FUL L1

=>
Uploading C:\Program Files\STNEXP\Queries\10567430clm58b.str
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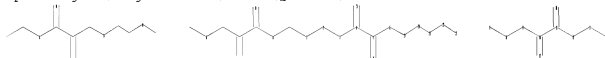


```
chain nodes :
1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16  17  18  19  20  21  22  23
chain bonds :
1-2   2-3   3-4   4-5   4-15   5-6   5-16   6-19   7-8   8-9   9-10   10-11   10-17   11-12
11-18   12-13   13-14   19-20   20-21   21-22   22-23
```

```
exact/norm bonds :
2-3  3-4  4-15  6-19  7-8  8-9  11-12  11-18  12-13  19-20  21-22  22-23
exact bonds :
1-2  4-5  5-6  5-16  9-10  10-11  10-17  13-14  20-21


Match level :
1:CLASS  2:CLASS  3:CLASS  4:CLASS  5:CLASS  6:CLASS  7:CLASS  8:CLASS  9:CLASS
10:CLASS  11:CLASS  12:CLASS  13:CLASS  14:CLASS  15:CLASS  16:CLASS  17:CLASS
18:CLASS  19:CLASS  20:CLASS  21:CLASS  22:CLASS  23:CLASS




L4      STRUCTURE UPLOADED

=> d l4
L4 HAS NO ANSWERS
L4            STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.


=> s l4 sss sam
SAMPLE SEARCH INITIATED 13:46:21 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -     421 TO ITERATE

100.0% PROCESSED     421 ITERATIONS                        0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:        7189 TO     9651
PROJECTED ANSWERS:              0 TO        0

L5          0 SEA SSS SAM L4

=> s l4 sss full
FULL SEARCH INITIATED 13:46:29 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -    7246 TO ITERATE

100.0% PROCESSED    7246 ITERATIONS                        4 ANSWERS
SEARCH TIME: 00.00.01

L6          4 SEA SSS FUL L4

=> d scan

L6    4 ANSWERS   REGISTRY  COPYRIGHT 2009 ACS on STN
IN    4,7,10,13-Tetraoxahexadecanedioic acid, 2,15-bis(methylene)-, 1,16-diethyl
      ester, homopolymer
MF    (C18 H30 O8)x
CI    PMS

      CM   1
```
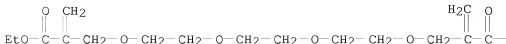
O   CH2   H2C   O
|| || || ||
EtO— C— C— CH2— O— CH2— CH2— O— CH2— CH2— O— CH2— CH2— O— CH2— C— C—

— OEt

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	380.40	380.62

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FILE COVERS 1907 - 18 Aug 2009 VOL 151 ISS 8
FILE LAST UPDATED: 17 Aug 2009 (20090817/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2009

CAplus now includes complete International Patent Classification (IPC)
reclassification data for the second quarter of 2009.

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This file contains CAS Registry Numbers for easy and accurate
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The ALL, BIB, MAX, and STD display formats in the CA/CAplus family
of databases have been updated to include new citing references
information. This enhancement may impact record import into
database management software. For additional information, refer
to NEWS 9.

=> s l6

L7   3 L6

```
=> d ibib ti abs hitstr l6 1-3
YOU HAVE REQUESTED DATA FROM FILE 'REGISTRY' - CONTINUE? (Y)/N:n


=> d ibib ti abs hitstr l7 1-3

L7   ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER:       2008:1012782  CAPLUS
DOCUMENT NUMBER:        149:269595
TITLE:                  Electron beam-curable composition and producing cured
                        coating, ink or adhesive
INVENTOR(S):            Kunita, Kazuto
PATENT ASSIGNEE(S):     Fujifilm Corporation, Japan
SOURCE:                 U.S. Pat. Appl. Publ., 32pp.
                        CODEN: USXXCO
DOCUMENT TYPE:          Patent
LANGUAGE:               English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

     PATENT NO.          KIND  DATE      APPLICATION NO.        DATE
     ---------------     ----  --------  --------------------   --------
     US 20080200581      A1    20080821  US 2008-27648          20080207
     JP 2008201889       A     20080904  JP 2007-39379          20070220
PRIORITY APPLN. INFO.:                   JP 2007-39379        A 20070220
TI   Electron beam-curable composition and producing cured coating, ink or
     adhesive
AB   Producing an electron beam-cured coating includes forming on a substrate a
     layer of a curable composition that includes ≥1 compound CH2:C(Q1)CARbRaX1
     (I) and a step of curing the layer of the curable composition by irradiating
     with an electron beam.  In I, Q1 = cyano group or -COX2 group, X1 = H,
     organic residue, or polymer chain bonded to C atom CA via a heteroatom, or
     halogen, X2 = H, organic residue, or polymer chain bonded to the carbonyl
     group via a heteroatom, or halogen, Ra and Rb = H, halogen, cyano group,
     or an organic residue, and X1 and X2, Ra and Rb, and X1 and Ra or Rb may be
     bonded to each other to form a cyclic structure.  An example curable
     composition contained F 177 surfactant 0.03, cyclohexanone 20, and
     CH2:C(COX2)CH2X1 (X2 = OEt; X1 = OCH2CH2OCOMe) 10 parts.
IT   1047993-80-5P
     RL: IMF (Industrial manufacture); TEM (Technical or engineered material
     use); PREP (Preparation); USES (Uses)
        (electron beam-curable composition with good adhesion to PET substrate)
RN   1047993-80-5  CAPLUS
CN   4,7,10,13-Tetraoxahexadecanedioic acid, 2,15-bis(methylene)-, 1,16-diethyl
     ester, homopolymer  (CA INDEX NAME)

     CM    1

     CRN  896113-18-1
     CMF  C18 H30 O8
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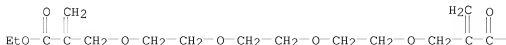
```
       O  CH2                                H2C  O
       ‖                                         ‖
  EtO—C—C—CH2—O—CH2—CH2—O—CH2—CH2—O—CH2—CH2—O—CH2—C—C
```

— OEt

L7   ANSWER 2 OF 3 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2006:673215 CAPLUS
DOCUMENT NUMBER: 145:113448
TITLE: Radiation-curable ink-jet inks containing
                        ethylenically polymerizable crosslinking agents with
                        excellent storage stability and sensitivity,
                        lithographic plates using them, and their manufacture
INVENTOR(S):   Sugai, Shoji; Kunita, Kazuo
PATENT ASSIGNEE(S):   Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 44 pp.
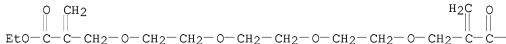   CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

      PATENT NO.   KIND   DATE   APPLICATION NO.   DATE
      ---------------   ----   --------   --------------------   --------
      JP 2006182990   A   20060713   JP 2004-380665   20041228
PRIORITY APPLN. INFO.:   JP 2004-380665   20041228
TI   Radiation-curable ink-jet inks containing ethylenically polymerizable
      crosslinking agents with excellent storage stability and sensitivity,
      lithographic plates using them, and their manufacture
AB   The inks contain polymerizable compds., colorants, and ≥1
      crosslinking agents selected from those bearing 2 ethylenically
      polymerizable groups and those bearing ≥3 ethylenically
      polymerizable groups, thus giving wear-resistant hydrophobic images on
      hydrophilic supports without a development process.
IT   896113-18-1
      RL: TEM (Technical or engineered material use); USES (Uses)
         (storage-stable radiation-curable ink-jet inks containing heteromethacrylic
         crosslinking agents for lithog. plates with good wear resistant)
RN   896113-18-1 CAPLUS
CN   4,7,10,13-Tetraoxahexadecanedioic acid, 2,15-bis(methylene)-, 1,16-diethyl
      ester (CA INDEX NAME)

         O CH2   H2C O
         ‖ ‖   ‖ ‖
   EtO—C—C—CH2—O—CH2—CH2—O—CH2—CH2—O—CH2—CH2—O—CH2—C—C—

— OEt

OS.CITING REF COUNT: 1   THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD
                                 (1 CITINGS)

ACCESSION NUMBER: 2004:138005 CAPLUS
DOCUMENT NUMBER: 140:375551
TITLE: Synthesis and photopolymerizations of new
                           hydroxyl-containing dimethacrylate crosslinkers
AUTHOR(S):   Avci, Duygu; Mathias, Lon J.
CORPORATE SOURCE: Department of Chemistry, Bogazici University,
                           Istanbul, 34342, Turk.
DOCUMENT TYPE: Journal
LANGUAGE: English
TI   Synthesis and photopolymerizations of new hydroxyl-containing
     dimethacrylate crosslinkers
AB   Two new hydroxyl-containing di(meth)acrylate monomers were synthesized from
     the reaction of Me α-chloromethylacrylate (MCMA) and of Et
     α-chloromethylacrylate (ECMA) with glycerol. The monomers were
     obtained as mixts. of two isomers in different ratios and in combination
     with the analogous trimethacrylate monomers. Each monomer was isolated by
     column chromatog. The photopolym. of these isomer mixts. and the
     trimethacrylate monomers was investigated individually by
     photodifferential scanning calorimetry (photoDSC) at room temperature using
     2,2'-dimethoxy-2-phenylacetophenone (DMPA) as a photoinitiator. The
     effect of hydrogen bonding on the rates of polymns. was
     examined The results obtained for the synthesized monomers were compared to
     the values obtained for com. monomers. The hydroxyl-containing
     dimethacrylates polymerize much faster and to considerably higher
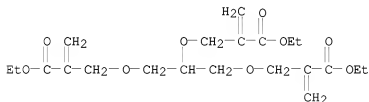   conversion than the trimethacrylate monomers. The maximum rates of
polymerization
     of the hydroxyl-containing monomers were higher than that of hexanediol
     dimethacrylate (HDDMA), comparable to glycerol dimethacrylate and lower
     than hexanediol diacrylate (HDDA) and 3-(acryloyloxy)-2-hydroxypropyl
     methacrylate (AHM).
IT   684213-81-8
     RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)
        (in synthesis and photopolymn. of hydroxyl-containing dimethacrylate
        crosslinkers)
RN   684213-81-8 CAPLUS
CN   2-Propenoic acid, 2,2',2''-[(1,2,3-propanetriyl)tris(oxymethylene)]tris-,
     triethyl ester (9CI) (CA INDEX NAME)

                             H2C   O
                               ‖   ‖
      O   CH2   O─CH2─C─C─OEt   O
      ‖   ‖   ‖
EtO─ C─ C─CH2─ O─ CH2─ CH─ CH2─ O─ CH2─ C─ C─ OEt
                                      ‖
                                     CH2
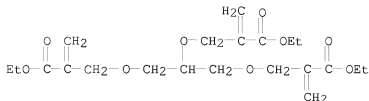

IT   684213-88-5P
     RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
        (synthesis and photopolymn. of hydroxyl-containing dimethacrylate
        crosslinkers)
RN   684213-88-5 CAPLUS
CN   2-Propenoic acid, 2,2',2''-[1,2,3-propanetriyltris(oxymethylene)]tris-,
     triethyl ester, homopolymer (9CI) (CA INDEX NAME)

     CM   1

```
CRN   684213-81-8
CMF   C21 H32 O9
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$$H_2C \quad O$$

```
OS.CITING REF COUNT:       7      THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD
                                  (7 CITINGS)
REFERENCE COUNT:          27      THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS
                                  RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT


=> file registry
COST IN U.S. DOLLARS                               SINCE FILE      TOTAL
                                                      ENTRY      SESSION
FULL ESTIMATED COST                                   21.42       402.04

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)         SINCE FILE      TOTAL
                                                      ENTRY      SESSION
CA SUBSCRIBER PRICE                                   -2.46        -2.46

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STRUCTURE FILE UPDATES:   17 AUG 2009  HIGHEST RN 1174495-28-3
DICTIONARY FILE UPDATES:  17 AUG 2009  HIGHEST RN 1174495-28-3

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  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document.  For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=>
Uploading C:\Program Files\STNEXP\Queries\10567430clm58c.str
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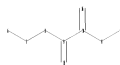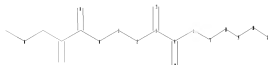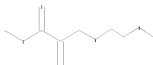
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chain nodes :
1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16  17  18  19  20  21
chain bonds :
1-2  2-3  3-4  3-13  4-5  4-14  5-17  6-7  7-8  8-9  9-10  9-15  10-11  10-16
11-12  17-18  18-19  19-20  20-21
exact/norm bonds :
1-2  2-3  3-13  5-17  6-7  7-8  10-11  10-16  11-12  17-18  19-20  20-21
exact bonds :
3-4  4-5  4-14  8-9  9-10  9-15  18-19


Match level :
1:CLASS   2:CLASS   3:CLASS   4:CLASS   5:CLASS   6:CLASS   7:CLASS   8:CLASS   9:CLASS
10:CLASS  11:CLASS  12:CLASS  13:CLASS  14:CLASS  15:CLASS  16:CLASS  17:CLASS
18:CLASS  19:CLASS  20:CLASS  21:CLASS



L8      STRUCTURE UPLOADED

=> d l8
L8 HAS NO ANSWERS
L8              STR
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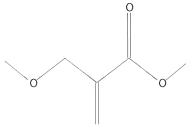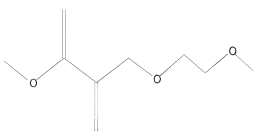


```
Structure attributes must be viewed using STN Express query preparation.


=> s l8 sss full
FULL SEARCH INITIATED 13:53:41 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -     7246 TO ITERATE

100.0% PROCESSED    7246 ITERATIONS                           13 ANSWERS
SEARCH TIME: 00.00.01

L9          13 SEA SSS FUL L8

=> file caplus
COST IN U.S. DOLLARS                           SINCE FILE      TOTAL
                                                 ENTRY        SESSION
```

```
FULL ESTIMATED COST                              186.36      588.40

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)        SINCE FILE    TOTAL
                                                    ENTRY     SESSION
CA SUBSCRIBER PRICE                                  0.00      -2.46

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FILE COVERS 1907 - 18 Aug 2009  VOL 151 ISS 8
FILE LAST UPDATED: 17 Aug 2009  (20090817/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED:  Jun 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE:  Jun 2009

CAplus now includes complete International Patent Classification (IPC)
reclassification data for the second quarter of 2009.

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http://www.cas.org/legal/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate
substance identification.

The ALL, BIB, MAX, and STD display formats in the CA/CAplus family
of databases have been updated to include new citing references
information.  This enhancement may impact record import into
database management software.  For additional information, refer
to NEWS 9.

=> s l9
L10         6 L9

=> d l10 ibib ti abs hitstr 1-6

L10  ANSWER 1 OF 6  CAPLUS  COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER:       2008:1012782  CAPLUS
DOCUMENT NUMBER:        149:269595
TITLE:                  Electron beam-curable composition and producing cured
                        coating, ink or adhesive
INVENTOR(S):            Kunita, Kazuto
PATENT ASSIGNEE(S):     Fujifilm Corporation, Japan
SOURCE:                 U.S. Pat. Appl. Publ., 32pp.
                        CODEN: USXXCO
DOCUMENT TYPE:          Patent
LANGUAGE:               English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:
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PATENT NO.        KIND   DATE       APPLICATION NO.        DATE
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US 20080200581    A1     20080821   US 2008-27648          20080207
JP 2008201889     A      20080904   JP 2007-39379          20070220
```

PRIORITY APPLN. INFO.:   JP 2007-39379   A   20070220
TI   Electron beam-curable composition and producing cured coating, ink or
      adhesive
AB   Producing an electron beam-cured coating includes forming on a substrate a
      layer of a curable composition that includes ≥1 compound CH2:C(Q1)CARbRaX1
      (I) and a step of curing the layer of the curable composition by irradiating
      with an electron beam. In I, Q1 = cyano group or –COX2 group, X1 = H,
      organic residue, or polymer chain bonded to C atom CA via a heteroatom, or
      halogen, X2 = H, organic residue, or polymer chain bonded to the carbonyl
      group via a heteroatom, or halogen, Ra and Rb = H, halogen, cyano group,
      or an organic residue, and X1 and X2, Ra and Rb, and X1 and Ra or Rb may be
      bonded to each other to form a cyclic structure. An example curable
      composition contained F 177 surfactant 0.03, cyclohexanone 20, and
      CH2:C(COX2)CH2X1 (X2 = OEt; X1 = OCH2CH2OCOMe) 10 parts.
IT   1047993-80-5P
      RL: IMF (Industrial manufacture); TEM (Technical or engineered material
      use); PREP (Preparation); USES (Uses)
         (electron beam-curable composition with good adhesion to PET substrate)
RN   1047993-80-5 CAPLUS
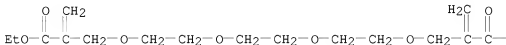CN   4,7,10,13-Tetraoxahexadecanedioic acid, 2,15-bis(methylene)-, 1,16-diethyl
      ester, homopolymer (CA INDEX NAME)

      CM   1

      CRN   896113-18-1
      CMF   C18 H30 O8

                                                    PAGE 1-A

          O   CH2   H2C   O
          ‖   ‖   ‖   ‖
   EtO—C—C—CH2—O—CH2—CH2—O—CH2—CH2—O—CH2—CH2—O—CH2—C—C—

                                                    PAGE 1-B

—OEt

L10 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2006:673215 CAPLUS
DOCUMENT NUMBER: 145:113448
TITLE: Radiation-curable ink-jet inks containing
                           ethylenically polymerizable crosslinking agents with
                           excellent storage stability and sensitivity,
                           lithographic plates using them, and their manufacture
INVENTOR(S):   Sugai, Shoji; Kunita, Kazuto
PATENT ASSIGNEE(S):   Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 44 pp.
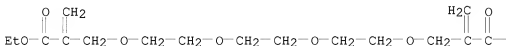   CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006182990	A	20060713	JP 2004-380665	20041228

PRIORITY APPLN. INFO.:   JP 2004-380665   20041228

TI   Radiation-curable ink-jet inks containing ethylenically polymerizable crosslinking agents with excellent storage stability and sensitivity, lithographic plates using them, and their manufacture

AB   The inks contain polymerizable compds., colorants, and ≥1 crosslinking agents selected from those bearing 2 ethylenically polymerizable groups and those bearing ≥3 ethylenically polymerizable groups, thus giving wear-resistant hydrophobic images on hydrophilic supports without a development process.

IT   896113-18-1
     RL: TEM (Technical or engineered material use); USES (Uses)
       (storage-stable radiation-curable ink-jet inks containing heteromethacrylic crosslinking agents for lithog. plates with good wear resistant)

RN   896113-18-1 CAPLUS

CN   4,7,10,13-Tetraoxahexadecanedioic acid, 2,15-bis(methylene)-, 1,16-diethyl ester (CA INDEX NAME)

PAGE 1-A

```
       O  CH2                                    H2C  O
       ‖  ‖                                       ‖   ‖
  EtO─C─C─CH2─O─CH2─CH2─O─CH2─CH2─O─CH2─CH2─O─CH2─C─C─
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PAGE 1-B

─OEt

OS.CITING REF COUNT: 1   THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD
                              (1 CITINGS)

L10 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2004:801227 CAPLUS
DOCUMENT NUMBER: 141:304331
TITLE: Photopolymerizable compositions with excellent laser sensitivity and storage stability and multifunctional crosslinker compounds for them
INVENTOR(S):   Kunida, Kazuto
PATENT ASSIGNEE(S):   Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 94 pp.
                     CODEN: JKXXAF
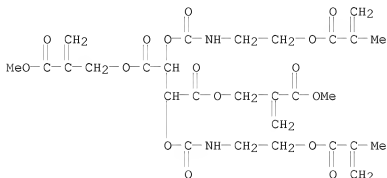DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004269569	A	20040930	JP 2003-58582	20030305
JP 4070637	B2	20080402		
EP 1466893	A1	20041013	EP 2004-5296	20040305

      R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,

TI   Photopolymerizable compositions with excellent laser sensitivity and
      storage stability and multifunctional crosslinker compounds for them
AB   The compns. contain (CH2:CZ1CO2R1NHCO2)mR2(OCOCZ2:CH2)n and
      (CH2:CZ1CO2R1NHCO2)mR2[CO2CRaC(OCX2):CH2]n [Z1 = H, Me; Z2 = H, Me,
      CHRbX1; X1,2 = (un)substituted oxy, amino, or thio; Ra,b H, hydrocarbyl;
      R1 = (O-containing) aliphatic hydrocarbon group; R2 = (O-containing) aliphatic
      hydrocarbon group; m, n = 1-5] and preferably alkali-soluble polyurethanes,
      thus giving lithog. plates for direct platemaking by laser exposure with
      good wear resistance.
IT   765292-19-1P   765292-21-5P
      RL: IMF (Industrial manufacture); TEM (Technical or engineered material
      use); PREP (Preparation); USES (Uses)
         (photopolymerizable compns. with good laser sensitivity and storage
         stability for lithog. plates with good wear resistance)
RN   765292-19-1 CAPLUS
CN   Butanedioic acid, 2,3-bis[[[[2-[(2-methyl-1-oxo-2-
      propenyl)oxy]ethyl]amino]carbonyl]oxy]-,
      bis[2-(methoxycarbonyl)-2-propenyl] ester, homopolymer (9CI) (CA INDEX
      NAME)

      CM   1

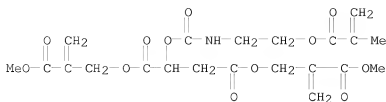   CRN   765292-18-0
      CMF   C28 H36 N2 O16

RN   765292-21-5 CAPLUS
CN   Butanedioic acid, [[[[2-[(2-methyl-1-oxo-2-
      propenyl)oxy]ethyl]amino]carbonyl]oxy]-,
      bis[2-(methoxycarbonyl)-2-propenyl] ester, homopolymer (9CI) (CA INDEX
      NAME)

      CM   1

      CRN   765292-20-4
      CMF   C21 H27 N O12

```
                    O                 O  CH2
       O  CH2    O   O─C─NH─CH2─CH2─O─C─C─Me
       ‖  ‖      ‖   ‖                 ‖
MeO─C─C─CH2─O─C─CH─CH2─C─O─CH2─C─C─OMe
    ‖                  ‖          ‖  ‖
    O                  O         CH2 O
```

TI   Synthesis and photopolymerizations of new hydroxyl-containing
      dimethacrylate crosslinkers

AB   Two new hydroxyl-containing di(meth)acrylate monomers were synthesized from
      the reaction of Me α-chloromethylacrylate (MCMA) and of Et
      α-chloromethylacrylate (ECMA) with glycerol. The monomers were
      obtained as mixts. of two isomers in different ratios and in combination
      with the analogous trimethacrylate monomers. Each monomer was isolated by
      column chromatog. The photopolymn. of these isomer mixts. and the
      trimethacrylate monomers was investigated individually by
      photodifferential scanning calorimetry (photoDSC) at room temperature using
      2,2'-dimethoxy-2-phenylacetophenone (DMPA) as a photoinitiator. The
      effect of hydrogen bonding on the rates of polymns. was
      examined The results obtained for the synthesized monomers were compared to
      the values obtained for com. monomers. The hydroxyl-containing
      dimethacrylates polymerize much faster and to considerably higher
      conversion than the trimethacrylate monomers. The maximum rates of
polymerization
      of the hydroxyl-containing monomers were higher than that of hexanediol
      dimethacrylate (HDDMA), comparable to glycerol dimethacrylate and lower
      than hexanediol diacrylate (HDDA) and 3-(acryloyloxy)-2-hydroxypropyl
      methacrylate (AHM).
IT   684213-81-8   684213-82-9
      RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)
         (in synthesis and photopolymn. of hydroxyl-containing dimethacrylate
         crosslinkers)
RN   684213-81-8 CAPLUS
CN   2-Propenoic acid, 2,2',2''-[(1,2,3-propanetriyl)tris(oxymethylene)]tris-,
      triethyl ester (9CI) (CA INDEX NAME)

```
                         H2C  O
                          ‖   ‖
      O  CH2          O─CH2─C─C─OEt     O
      ‖   ‖           ‖                 ‖
EtO─C─C─CH2─O─CH2─CH─CH2─O─CH2─C─C─OEt
                                  ‖
                                 CH2
```
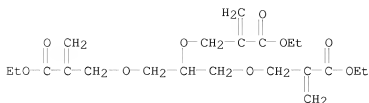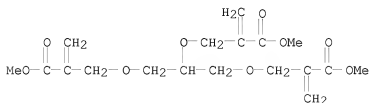
RN   684213-82-9 CAPLUS
CN   2-Propenoic acid, 2,2',2''-[1,2,3-propanetriyltris(oxymethylene)]tris-,
     trimethyl ester (9CI) (CA INDEX NAME)

```
                         H2C  O
                          ‖   ‖
      O  CH2          O─CH2─C─C─OMe     O
      ‖   ‖           ‖                 ‖
MeO─C─C─CH2─O─CH2─CH─CH2─O─CH2─C─C─OMe
                                  ‖
                                 CH2
```

IT   684213-87-4P   684213-88-5P
     RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
        (synthesis and photopolymn. of hydroxyl-containing dimethacrylate
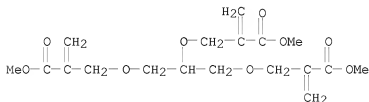   crosslinkers)
RN   684213-87-4 CAPLUS
CN   2-Propenoic acid, 2,2',2''-[1,2,3-propanetriyltris(oxymethylene)]tris-,
     trimethyl ester, homopolymer (9CI) (CA INDEX NAME)

     CM   1

     CRN 684213-82-9
     CMF C18 H26 O9

```
                         H2C  O
                          ‖   ‖
      O  CH2          O─CH2─C─C─OMe     O
      ‖   ‖           ‖                 ‖
MeO─C─C─CH2─O─CH2─CH─CH2─O─CH2─C─C─OMe
                                  ‖
                                 CH2
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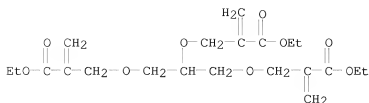
RN   684213-88-5 CAPLUS
CN   2-Propenoic acid, 2,2',2''-[1,2,3-propanetriyltris(oxymethylene)]tris-,
     triethyl ester, homopolymer (9CI) (CA INDEX NAME)

     CM   1

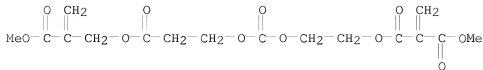   CRN 684213-81-8
     CMF C21 H32 O9
```

```
                            H2C  O
                            ‖   ‖
     O   CH2          O—CH2—C—C—OEt    O
     ‖   |            |                ‖
EtO—C—C—CH2—O—CH2—CH—CH2—O—CH2—C—C—OEt
         |                         ‖
                                   CH2
```

L10 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2003:173063 CAPLUS
DOCUMENT NUMBER: 138:229268
TITLE: Plate-making method of printing plate
INVENTOR(S):   Kunita, Kazuto
PATENT ASSIGNEE(S):   Fuji Photo Film Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 148 pp.
                           CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

     PATENT NO.   KIND   DATE   APPLICATION NO.   DATE
     ---------------   ----   --------   --------------------   --------
     EP 1288720   A1   20030305   EP 2002-19103   20020829
        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
            IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK
     JP 2003066601   A   20030305   JP 2001-259725   20010829
     JP 4235375   B2   20090311
     JP 2003064130   A   20030305   JP 2001-259726   20010829
     US 20030190554   A1   20031009   US 2002-230088   20020829
     US 6875557   B2   20050405
PRIORITY APPLN. INFO.:   JP 2001-259725   A 20010829
                                            JP 2001-259726   A 20010829
TI   Plate-making method of printing plate
AB   A plate-making method of a printing plate comprises exposing a printing
     plate precursor having a photosensitive layer comprising a
     photopolymerizable composition containing (1) a crosslinking agent having two
     ethylenic polymerizable groups and (2) a crosslinking agent having three
     or more ethylenic polymerizable groups, and development processing the
     exposed printing plate precursor with an alkali developer having a pH of
     ≤ 12.5.
IT   500769-95-9
     RL: POF (Polymer in formulation); TEM (Technical or engineered material
     use); USES (Uses)
        (photopolymerizable composition for plate-making method of printing plate
        containing)
RN   500769-95-9 CAPLUS
CN   4,7,9,13-Tetraoxahexadecanedioic acid, 2,15-bis(methylene)-3,8,12-trioxo-,
     dimethyl ester, polymer with 2-[[3-[(1-oxo-2-propenyl)oxy]-2,2-bis[[(1-oxo-
     2-propenyl)oxy]methyl]propoxy]methyl]-2-[[(1-oxo-2-propenyl)oxy]methyl]-
     1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

     CM   1

     CRN 500769-94-8

CMF C16 H20 O11

$$MeO-\overset{O}{\overset{\|}{C}}-\overset{CH_2}{\overset{\|}{C}}-CH_2-O-\overset{O}{\overset{\|}{C}}-CH_2-CH_2-O-\overset{O}{\overset{\|}{C}}-O-CH_2-CH_2-O-\overset{O}{\overset{\|}{C}}-\overset{CH_2}{\overset{\|}{C}}-\overset{O}{\underset{\|}{\overset{\|}{C}}}-OMe$$

CM   2

CRN   29570-58-9
CMF   C28 H34 O13

(chemical structure)

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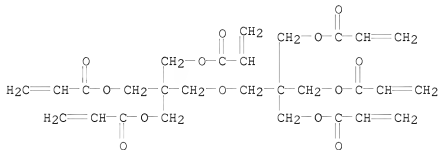OS.CITING REF COUNT:        5     THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD
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REFERENCE COUNT:            7     THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS
                                  RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10  ANSWER 6 OF 6  CAPLUS  COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER:       2000:484355  CAPLUS
DOCUMENT NUMBER:        133:112451
TITLE:                  Heat development photosensitive material for printing
                        platemaking
INVENTOR(S):            Muramatsu, Yasuhiko
PATENT ASSIGNEE(S):     Konica Co., Japan
SOURCE:                 Jpn. Kokai Tokkyo Koho, 47 pp.
                        CODEN: JKXXAF
DOCUMENT TYPE:          Patent
LANGUAGE:               Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

     PATENT NO.         KIND  DATE       APPLICATION NO.        DATE
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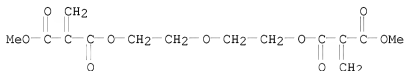     JP 2000199936      A     20000718   JP 1999-1159           19990106
PRIORITY APPLN. INFO.:                   JP 1999-1159           19990106
TI   Heat development photosensitive material for printing platemaking
AB   The title photosensitive material contains, on a support, an organic Ag salt,
     photosensitive Ag halide grains, a reducing agent, and either (1) a compound
     having ≥2 cyclic acid anhydride groups, (2) a compound having
     ≥2 acetal groups, or (3) a compound having ≥2 2-substituted
     acrylate groups or (4) ≥1 carbodiimide compound and ≥1 acid
     anhydride.  The material shows improved film strength and storage
     stability and high contrast even upon storage for a long time.
IT   283595-16-4
```

RL: DEV (Device component use); MOA (Modifier or additive use); TEM
      (Technical or engineered material use); USES (Uses)
         (photothermog. material containing acid anhydride, acetal compound,
acrylate,
         or carbodiimide)
RN   283595-16-4 CAPLUS
CN   Propanedioic acid, methylene-, oxydi-2,1-ethanediyl dimethyl ester (9CI)
      (CA INDEX NAME)

OS.CITING REF COUNT: 1   THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD
                                  (2 CITINGS)

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=> S 896113-18-1/RN

L11   1 896113-18-1/RN

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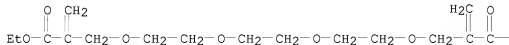NOTICE SET TO 1 U.S. DOLLAR FOR DISPLAY COMMAND
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L11   ANSWER 1 OF 1  REGISTRY   COPYRIGHT 2009 ACS on STN
RN    896113-18-1  REGISTRY
CN    4,7,10,13-Tetraoxahexadecanedioic acid, 2,15-bis(methylene)-, 1,16-diethyl
      ester  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN    4,7,10,13-Tetraoxahexadecanedioic acid, 2,15-bis(methylene)-, diethyl
      ester (9CI)
MF    C18 H30 O8
CI    COM
SR    CA
LC    STN Files:   CA, CAPLUS
DT.CA  CAplus document type:  Patent
RL.P   Roles from patents:  USES (Uses)
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PAGE 1-B

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